

Rust Stain Below Outside Door Handle

Service Category Vehicle Exterior

Section Door/Hatch

Market USA

Toyota Supports
 ASE Certification 

Applicability

YEAR(S)	MODEL(S)	ADDITIONAL INFORMATION
2008 – 2012	Highlander, Highlander HV	

REVISION NOTICE

August 29, 2012 Rev2:

- The title has been updated.
- Applicability has been updated to include 2012 model year vehicles.
- The Introduction has been updated.

November 30, 2011 Rev1:

- The Installation Procedure has been updated.

Any previous printed versions of this bulletin should be discarded.

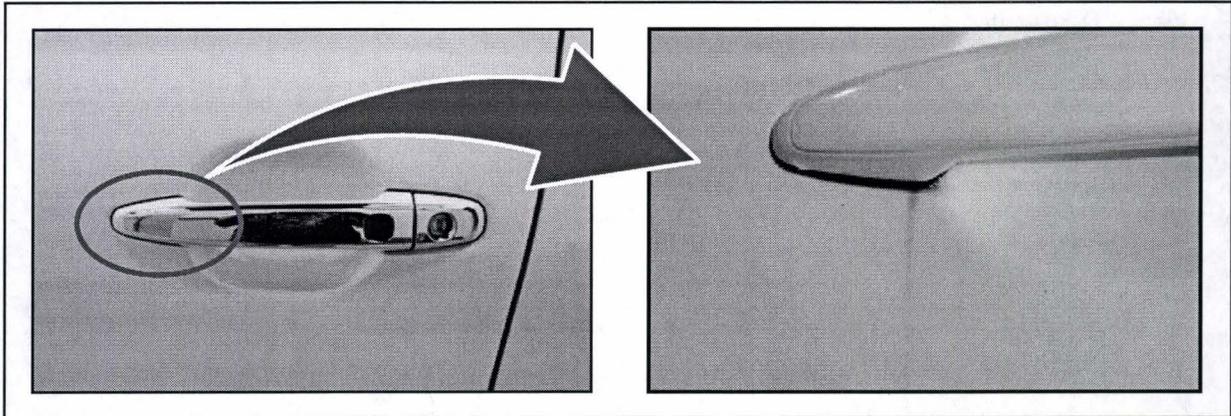
Introduction

Some 2008 – 2012 model year Highlander and Highlander HV vehicles may exhibit a condition where rust stains develop below one or more of the exterior door handles as shown in Figure 1. An improved door handle nut has been developed to address this condition.

Rust Stain Below Outside Door Handle

Introduction (Continued)

Figure 1. Rust Stain Location Example



Production Change Information

This bulletin applies to vehicles produced **BEFORE** the Production Change Effective VINs shown below.

MODEL	ENGINE	PRODUCTION CHANGE EFFECTIVE VIN
Highlander	2GR-FE	5TDZK3EH#CS057287
		5TDYK3EH#CS057291
		5TDBK3EH#CS107940
		5TDDK3EH#CS107939
	1AR-FE	5TDZA3EH#CS020084

Warranty Information

OP CODE	DESCRIPTION	TIME	OFF	T1	T2
BD9091	R & R Door Handle Nut (All Doors)	1.0	90179-05118	67	17

APPLICABLE WARRANTY

- This repair is covered under the Toyota Comprehensive Warranty. This warranty is in effect for 36 months or 36,000 miles, whichever occurs first, from the vehicle's in-service date.
- Warranty application is limited to occurrence of the specified condition described in this bulletin.

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Parts Information

PREVIOUS PART NUMBER	CURRENT PART NUMBER	PART NAME	PART IDENTIFICATION	QTY
90179-05118	Same	Nut	Glossy Silver	4 (1 per door handle)

Required Tools & Equipment

SPECIAL SERVICE TOOLS (SST)	PART NUMBER	QTY
Plastic Pry Tool Set*	00002-06000-01	1

REQUIRED TOOLS & MATERIAL	QTY
Razor Blade	1
Torx (T30) Socket Wrench	1

NOTE

Additional SSTs may be ordered by calling 1-800-933-8335.

* Essential SST.

Service Bulletin Overview

This bulletin will instruct you to replace the Door Handle nuts on all 4 doors. The bulletin has been divided into 2 sections, refer to page 3 (below) for the Front Door repair procedure and page 13 for the Rear Door repair procedure. Any rust stain(s) should be cleaned after disassembly and prior to reassembly.

Repair Procedure

Front Door Outside Handle Removal Procedure

NOTE

Perform the same procedure for the left and right front door handles.

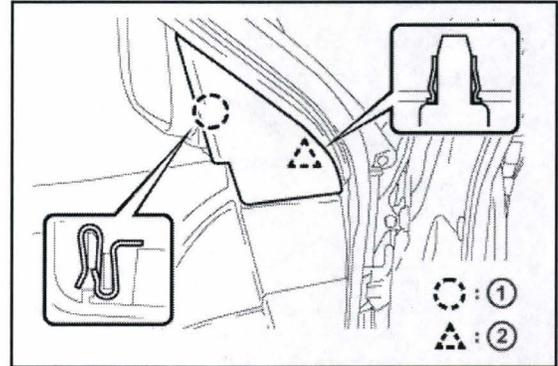
Rust Stain Below Outside Door Handle

Repair Procedure

Front Door Outside Handle Removal Procedure (Continued)

1. Remove the front door lower frame bracket garnish by disengaging the claw and clip.

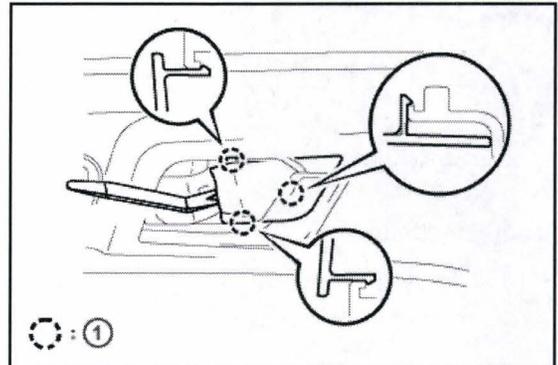
Figure 2.



1	Clip
2	Claw

2. Remove the front door inside handle bezel plug by using the plastic pry tool and disengaging the 3 claws.

Figure 3.



1	Claw
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Rust Stain Below Outside Door Handle

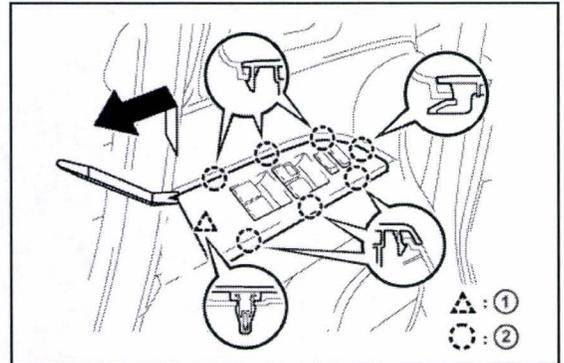
Repair Procedure

Front Door Outside Handle Removal Procedure (Continued)

3. Remove the front door armrest upper base panel.

A. Using a plastic pry tool, disengage the 7 claws and clip, and remove the front armrest upper base panel.

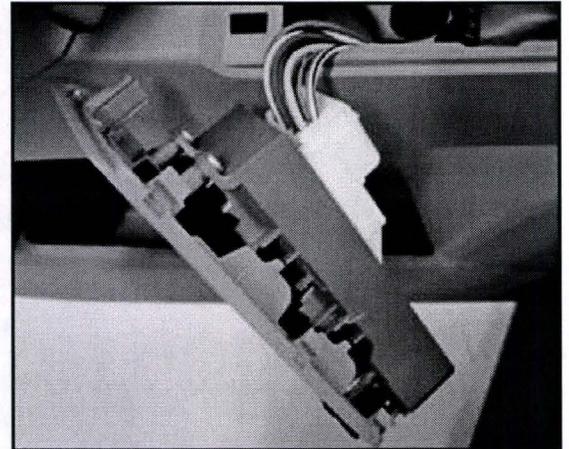
Figure 4.



1	Clip
2	Claw

B. Disconnect the window control switch.

Figure 5.



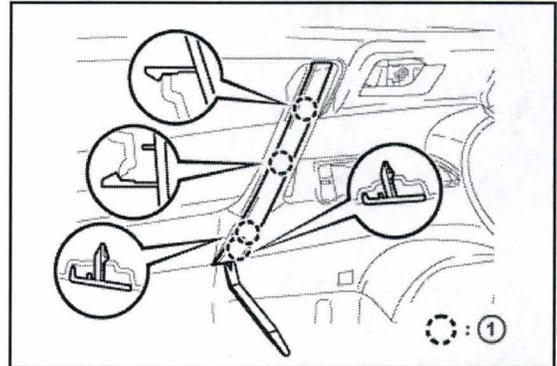
Rust Stain Below Outside Door Handle

Repair Procedure

Front Door Outside Handle Removal Procedure (Continued)

4. Remove the assist grip cover by using the plastic pry tool and disengaging the 4 claws.

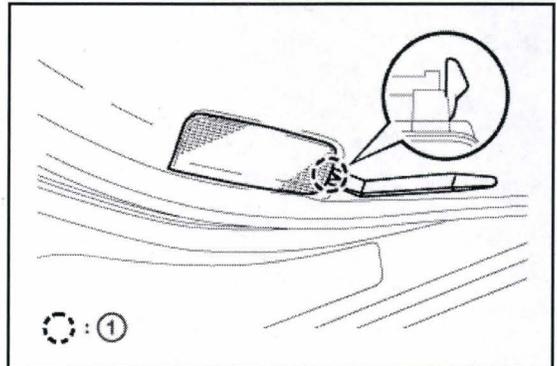
Figure 6.



1	Claw
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5. Remove the courtesy light assembly.
 - A. Using a plastic pry tool, disengage the claw and remove the courtesy light assembly.
 - B. Disconnect the connector.

Figure 7.



1	Claw
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Rust Stain Below Outside Door Handle

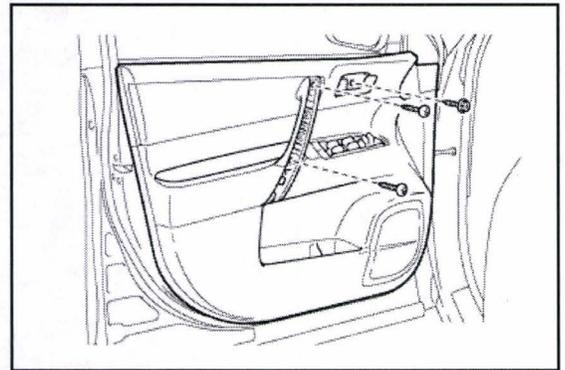
Repair Procedure

Front Door Outside Handle Removal Procedure (Continued)

6. Remove the front door trim board sub-assembly.

A. Remove the 3 screws.

Figure 8.

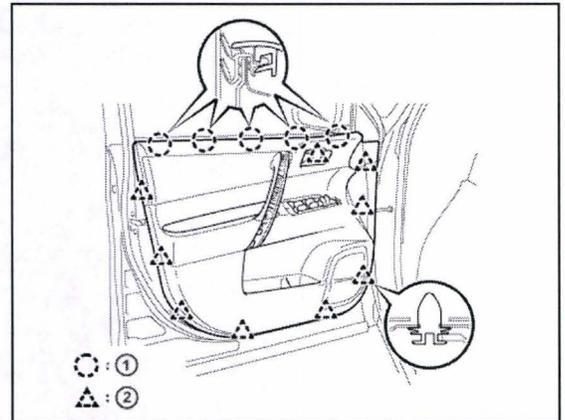


B. Using a plastic pry tool, disengage the 9 clips.

Figure 9.

NOTICE

Carefully remove the inner door panel by lifting the panel rather than pulling to prevent damage to inner belt molding weather strip. Damage may occur if the panel is not properly removed.



1	Claw
2	Clip

C. Disengage the 5 claws and separate the front door trim board sub-assembly from the front door inner glass weather-strip.

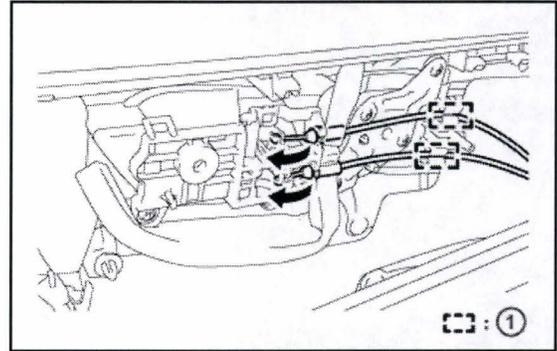
Rust Stain Below Outside Door Handle

Repair Procedure

Front Door Outside Handle Removal Procedure (Continued)

D. Disengage the 2 clamps.

Figure 10.



1	Clamp
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E. Disconnect the front door lock remote control cable and front door inside locking cable.

7. Disconnect the front door latch connector.

Figure 11.



Rust Stain Below Outside Door Handle

Repair Procedure

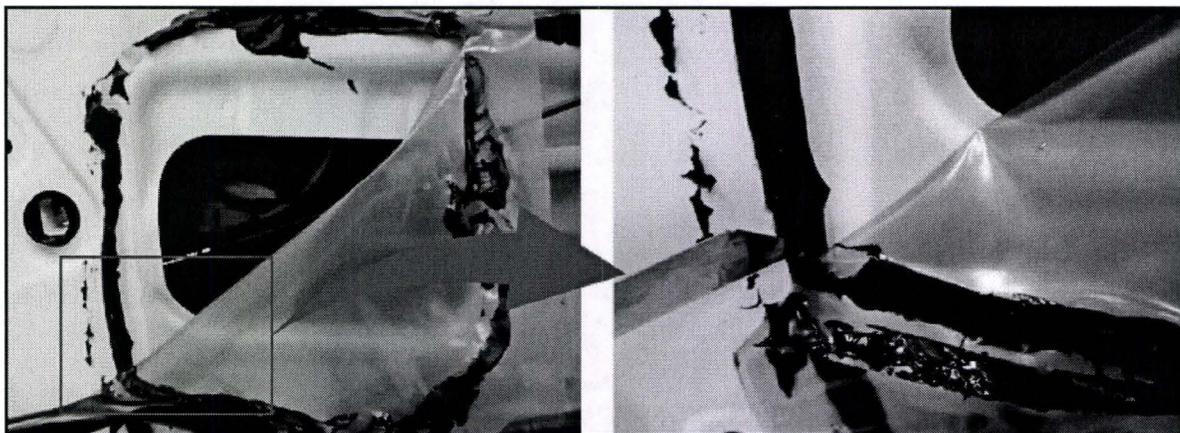
Front Door Outside Handle Removal Procedure (Continued)

8. Peel back the corner of the moisture barrier.

HINT

Use a razor blade between butyl tape and moisture barrier.

Figure 12.



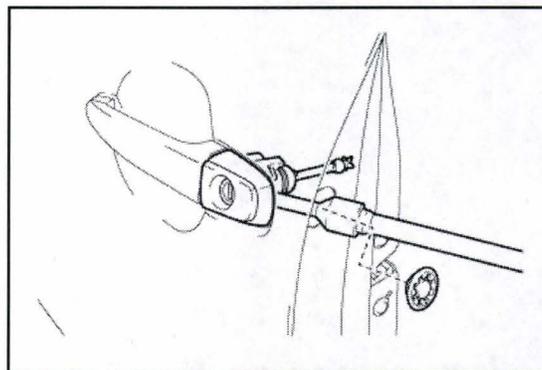
Rust Stain Below Outside Door Handle

Repair Procedure

Front Door Outside Handle Removal Procedure (Continued)

9. Remove the front door outside handle cover (for driver side).
 - A. Remove the hole plug.

Figure 13.



- B. Using a Torx socket (T30), loosen the screw and remove the front door outside handle cover and the door lock key cylinder as a unit.

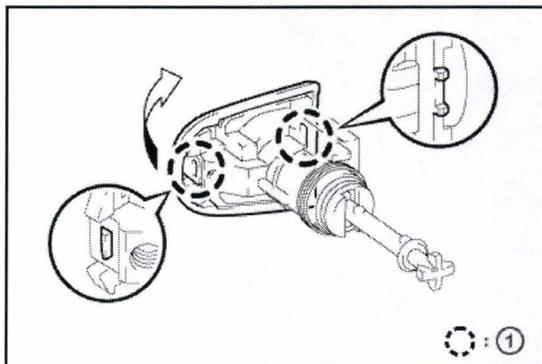
Torque: 4.0 N*m (41 kgf*cm, 35 in*lbf)

HINT

The screw cannot be removed because it is integrated into the front door outside handle frame sub-assembly.

- C. Using a plastic pry tool, disengage the 2 claws and remove the front door outside handle cover.

Figure 14.



1	Claw
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Rust Stain Below Outside Door Handle

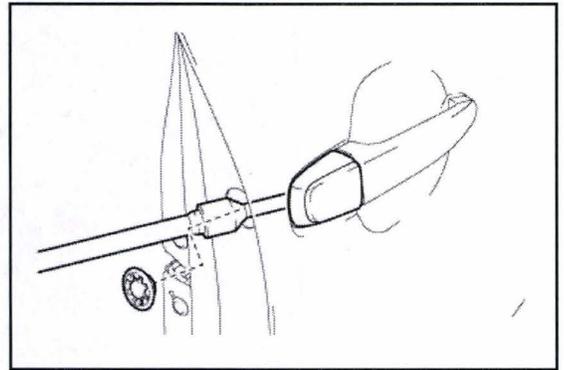
Repair Procedure

Front Door Outside Handle Removal Procedure (Continued)

10. Remove the front door outside handle cover (for passenger side).

A. Remove the hole plug.

Figure 15.



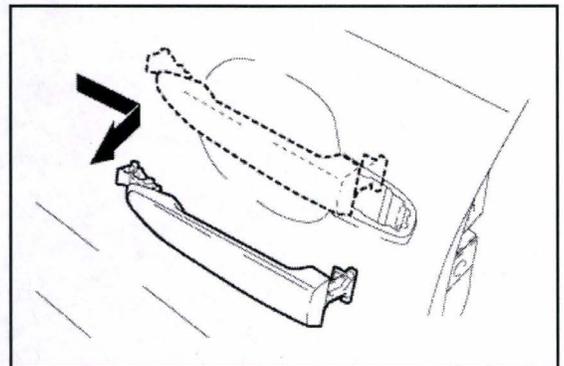
B. Using a Torx socket (T30), loosen the screw and remove the front door outside handle cover and the door lock key cylinder as a unit.

HINT

The screw cannot be removed because it is integrated into the front door outside handle frame sub-assembly.

11. Remove the front door outside handle assembly (w/o Smart Key System) by removing the front door outside handle assembly as shown.

Figure 16.



Rust Stain Below Outside Door Handle

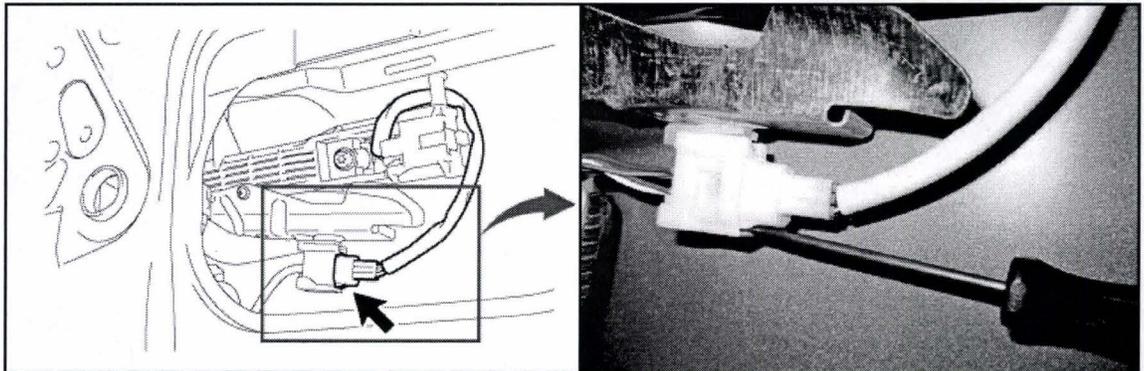
Repair Procedure

Front Door Outside Handle Removal Procedure (Continued)

12. Remove the front door outside handle assembly (w/Smart Key System).

A. Disconnect the connector.

Figure 17.

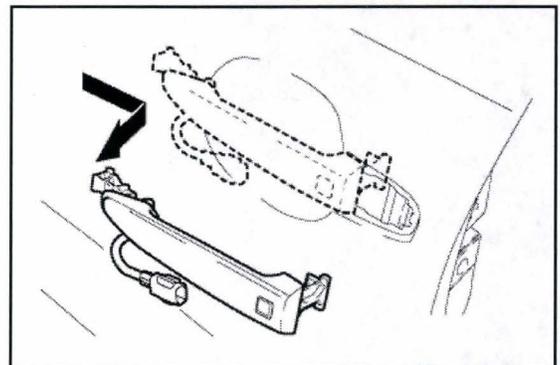


HINT

Place a small pick under the connector tab to release.

B. Remove the front door outside handle assembly as shown.

Figure 18.



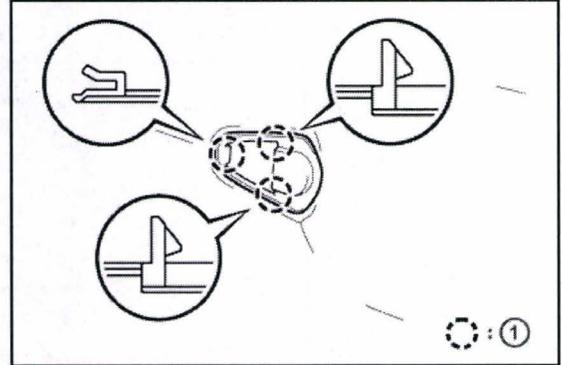
Rust Stain Below Outside Door Handle

Repair Procedure

Front Door Outside Handle Removal Procedure (Continued)

13. Remove the front door outside handle pad by disengaging the 3 claws.

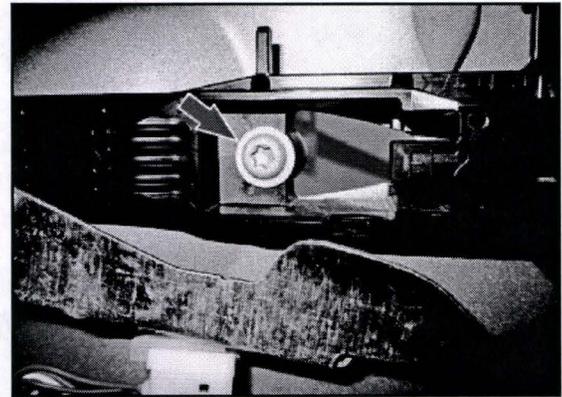
Figure 19.



1	Claw
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14. Remove the forward front door outside handle Torx screw by using a Torx socket (T30) and removing the screw.

Figure 20. Remove Torx Screw



Rust Stain Below Outside Door Handle

Repair Procedure (Continued)

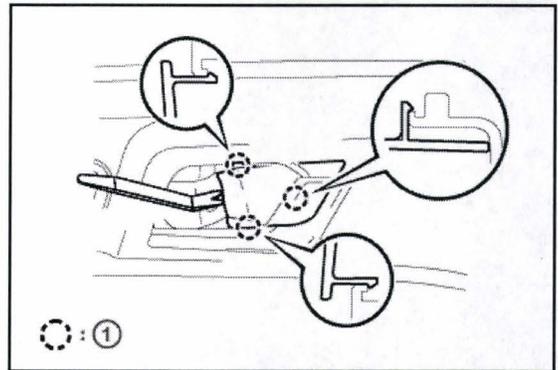
Rear Door Outside Handle Removal Procedure

HINT

Perform the same procedure for the left and right rear door handles.

1. Remove the rear door inside handle bezel plug by using a plastic pry tool and disengaging the 3 claws.

Figure 21.

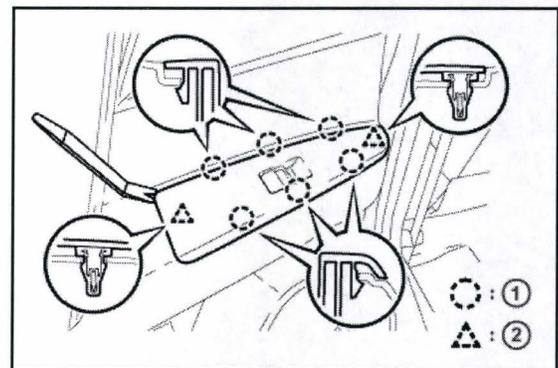


1	Claw
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2. Remove the rear door armrest upper base panel.

- A. Using a plastic pry tool, disengage the 6 claws and 2 clips.

Figure 22.



1	Claw
2	Clip

- B. Disconnect the connector.

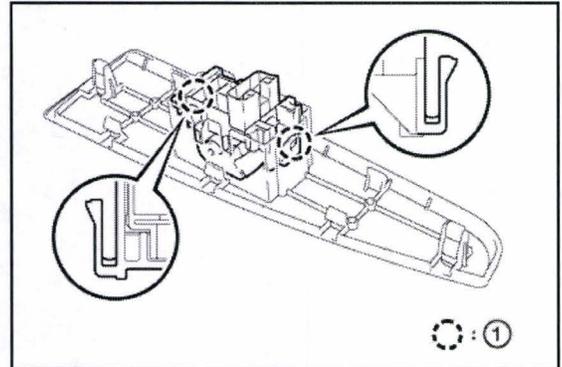
Rust Stain Below Outside Door Handle

Repair Procedure

Rear Door Outside Handle Removal Procedure (Continued)

3. Remove the rear power window regulator switch assembly by disengaging the 2 claws.

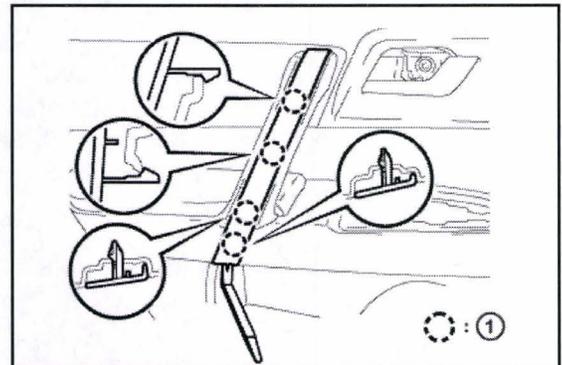
Figure 23.



1	Claw
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4. Remove the door assist grip cover by using a plastic pry tool and disengaging the 4 claws.

Figure 24.



1	Claw
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Rust Stain Below Outside Door Handle

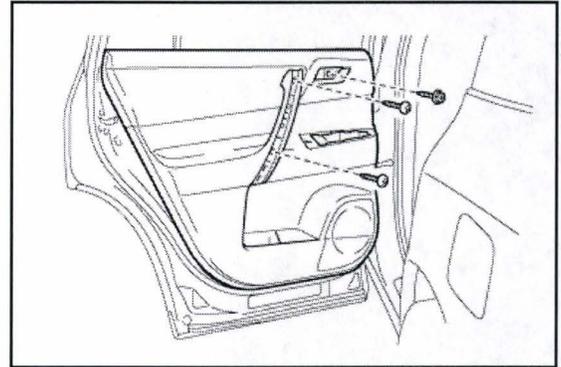
Repair Procedure

Rear Door Outside Handle Removal Procedure (Continued)

5. Remove the door trim board sub-assembly.

A. Remove the 3 screws.

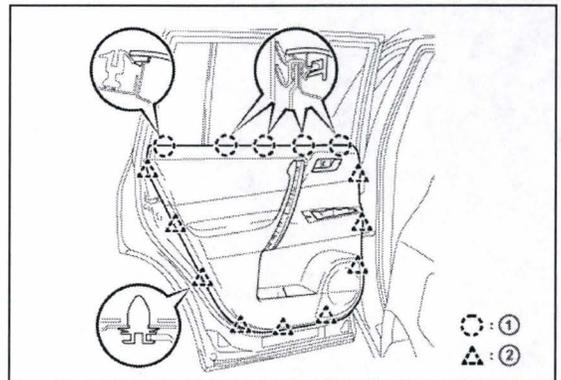
Figure 25.



B. Using a plastic pry tool, disengage the 9 clips.

C. Disengage the 5 claws and separate the rear door trim board sub-assembly from the rear door inner glass weatherstrip.

Figure 26.



NOTICE

Carefully remove the inner door panel by lifting the panel rather than pulling to prevent damage to inner belt molding weather strip. Damage may occur if the panel is not properly removed.

1	Claw
2	Clip

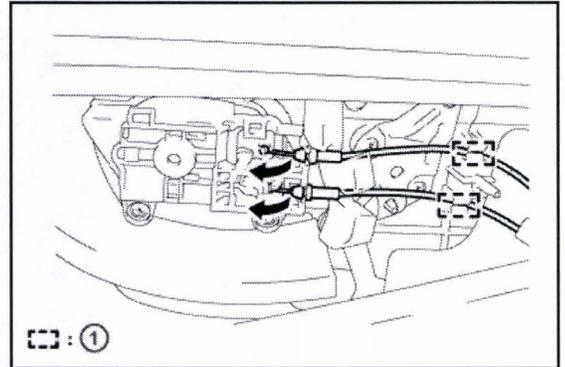
Rust Stain Below Outside Door Handle

Repair Procedure

Rear Door Outside Handle Removal Procedure (Continued)

D. Disengage the 2 clamps.

Figure 27.



1	Clamp
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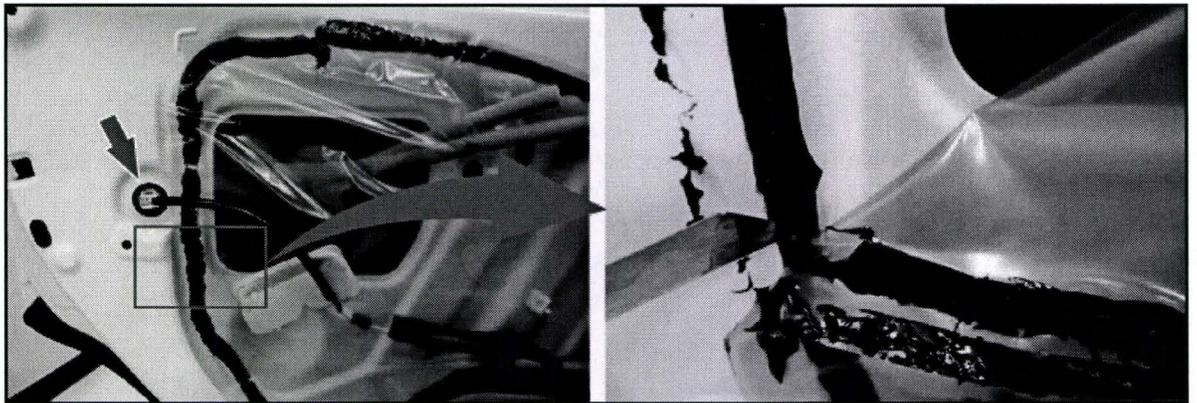
E. Disconnect the front door lock remote control cable and rear door inside locking cable.

6. Disconnect the rear door latch connector and peel back the upper corner of the moisture barrier.

HINT

Use a razor blade between butyl tape and moisture barrier.

Figure 28.



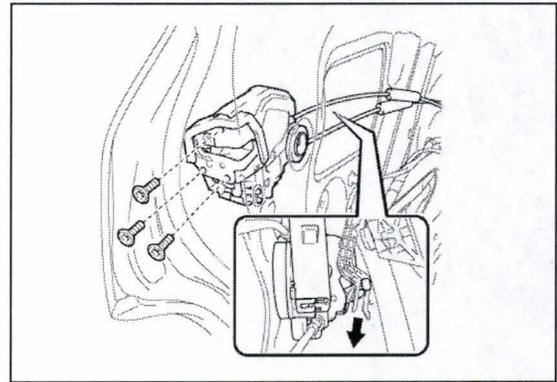
Rust Stain Below Outside Door Handle

Repair Procedure

Rear Door Outside Handle Removal Procedure (Continued)

7. Remove the rear door lock assembly.
 - A. Using the Torx socket (T30), remove the 3 screws.
Torque: 5.0 N*m (51 kgf*cm, 44 in*lbf)

Figure 29.

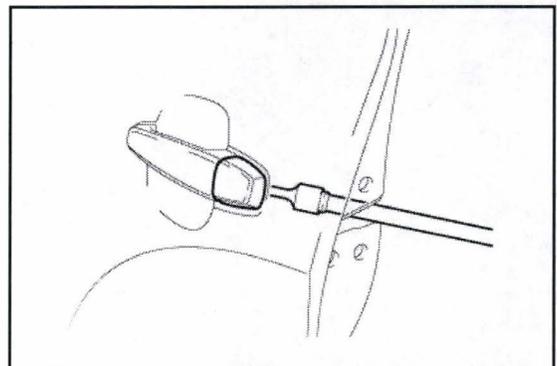


- B. Move the rear door lock assembly downward and pull the release plate out of the rear door outside handle frame.

8. Remove the rear door outside handle cover.

- A. Using a Torx socket wrench (T30), loosen the screw.
Torque: 4.0 N*m (41 kgf*cm, 35 in*lbf)

Figure 30.



HINT

The screw cannot be removed because it is integrated into the rear door outside handle frame sub-assembly.

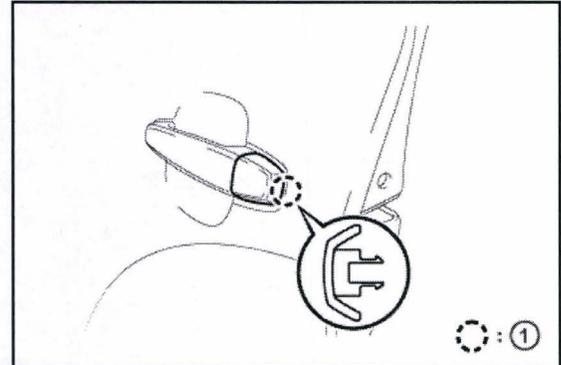
Rust Stain Below Outside Door Handle

Repair Procedure

Rear Door Outside Handle Removal Procedure (Continued)

- B. Disengage the claw and remove the rear door outside handle cover.

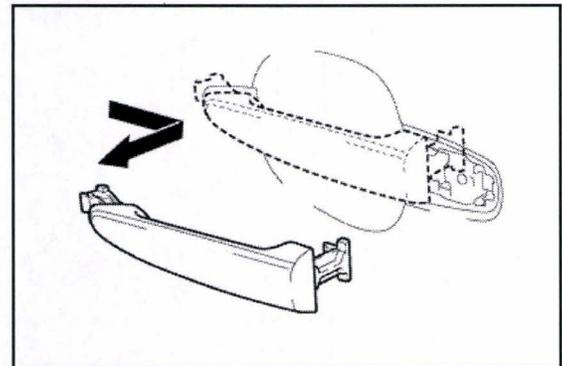
Figure 31.



1	Claw
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9. Remove the rear door outside handle assembly as shown.

Figure 32.



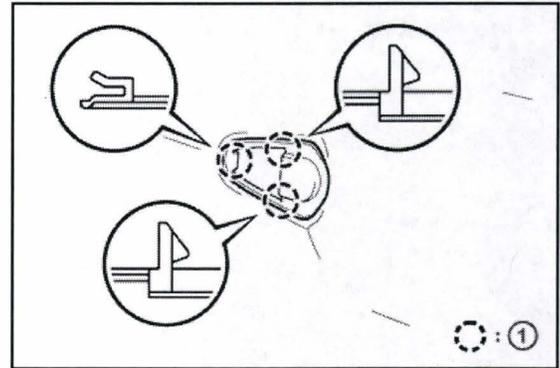
Rust Stain Below Outside Door Handle

Repair Procedure

Rear Door Outside Handle Removal Procedure (Continued)

- Remove the rear door outside handle pad by disengaging the 3 claws.

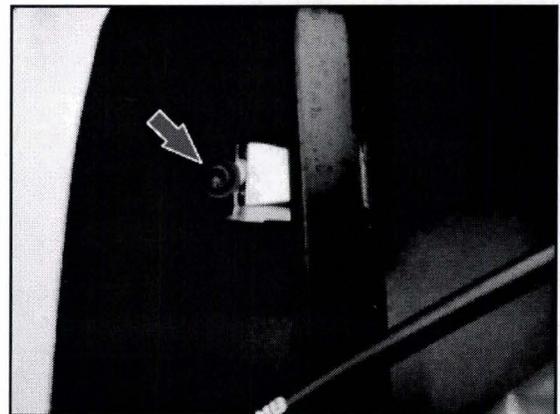
Figure 33.



1	Claw
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- Remove the forward rear door outside handle Torx screw by using a Torx socket (T30) as shown.

Figure 34. Remove Torx Screw



Installation Procedure

- Clean the area around the door handles to remove any rust staining by using a micro finishing compound. If the rust cannot be removed by using adequate micro finishing compound, further refinishing techniques may need to be used such as a rubbing compound.
- Install the new nut, re-using the original Torx screw removed previously, and then reassemble in reverse order.

Torque: 4.0 N*m (42 kgf*cm, 35 in*lbf)

- Check operation of inner and outer door handles.